Review Article

A Review of Digital Marketing Practices among SMEs in Indonesia: Trends, Challenges, and Opportunities

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Abstract: *This literature review examines how Indonesian Small and Medium Enterprises (SMEs) are transforming their marketing strategies in response to the rise of digital technologies. Focusing on peer-reviewed studies published between 2018 and 2024, the paper synthesizes key findings on the adoption of digital marketing tools among SMEs across different regions in Indonesia. The review highlights commonly used platforms such as Instagram, WhatsApp Business, Shopee, and Tokopedia, as well as emerging trends in influencer marketing, live commerce, and short-form video content. Despite increasing adoption, many SMEs still face critical challenges, including limited digital literacy, inadequate infrastructure in rural areas, and financial constraints that hinder effective and sustainable implementation. Furthermore, the lack of strategic integration and long-term planning often results in fragmented digital efforts. The study also identifies several enabling factors, including government programs like "UMKM Go Digital," platform-based seller education, and expanding mobile internet penetration. These findings contribute to a more comprehensive understanding of Indonesia's SME digital landscape and suggest that a combined approach, strengthening internal capabilities while enhancing external ecosystem support essential for accelerating inclusive digital marketing transformation.*

Keywords: *Digital Marketing, SMEs, Indonesia, Technology Adoption, Social Media, E-commerce, Digital Transformation.*

I. INTRODUCTION

The operational dynamics of small and medium-sized businesses (SMEs) worldwide, including in developing nations like Indonesia, have been significantly altered in recent years by digital transformation. Digital tool adoption is now not only a strategic advantage but also a survival necessity for businesses as they deal with global competition, changing consumer preferences, and rapid technological advancements. SMEs are a key contributor to economic resilience and inclusive growth in Indonesia, accounting for over 99% of all business entities and over 60% of the GDP and employment of the nation (Kementerian Koperasi dan UKM, 2022). However, despite their significant economic role, many Indonesian SMEs remain vulnerable to structural limitations and technological lag. The COVID-19 pandemic further exposed these vulnerabilities, compelling many enterprises to reevaluate their reliance on traditional operating models and to accelerate their digital adoption as a matter of urgency. Fortunately, the increasing accessibility of digital platforms, spanning e-commerce marketplaces, mobile-based financial services, cloud-based applications, and social media, has opened new avenues for SMEs to engage customers, streamline internal processes, and scale their businesses beyond local boundaries. Mobile internet penetration and the affordability of entry-level digital tools have played a significant role in democratizing digital access, even for micro-enterprises. Nonetheless, digital transformation for SMEs goes far beyond the mere use of technology; it demands a strategic realignment of business processes, customer engagement models, and value propositions. It also requires cultivating digital capabilities, fostering a culture of innovation, and leveraging partnerships with platforms, governments, and support institutions. In this context, the success of digital transformation among Indonesian SMEs is increasingly viewed as a key determinant of their competitiveness, productivity, and long-term sustainability in the digital economy. In addition to technological adaptation, addressing this imperative entails filling in fundamental gaps in digital literacy, funding, and infrastructure, especially in the nation's rural and underdeveloped areas. It also entails making sure that private sector initiatives and policy interventions complement one another to hasten the development of an inclusive and resilient digital ecosystem for Indonesian SMEs.

Given the emergence of digital technologies and the evolving habits of contemporary consumers, marketing—one of the most dynamic and customer-facing business functions—has experienced a significant transformation. SMEs have historically promoted their goods and services primarily through offline marketing channels like printed ads, word-of-mouth recommendations, banner placements, and community involvement. Although these techniques were successful in their day, they frequently had a narrow scope, were challenging to quantify, and demanded a large time and human resource commitment. In contrast, the advent of digital marketing has provided SMEs with a more efficient, data-driven, and scalable set of tools for customer engagement. Strategies now involve the use of social media platforms, Search Engine Optimization (SEO), content

creation, influencer marketing, email campaigns, and data analytics to capture customer interest and track marketing performance in real time (Bhuiyan et al., 2024; Luna Amador & Caraballo Payares, 2023). In Indonesia, the proliferation of mobile devices and affordable internet access has accelerated this shift, particularly through the widespread adoption of platforms such as Tokopedia, Shopee, Instagram, WhatsApp Business, and the rapidly growing TikTok Shop. These digital platforms empower SMEs—especially micro and home-based enterprises—to expand their market reach, personalize customer interactions, and reduce promotional costs while leveraging user-generated content and algorithm-driven exposure (Yasri, 2020). Moreover, live-streaming commerce, interactive product reviews, and automated messaging tools are becoming increasingly common features in the digital marketing arsenal of Indonesian SMEs. Despite these advancements, however, many small businesses still use these tools in a fragmented or informal manner, lacking integrated strategies, customer segmentation, or performance metrics. Thus, while digital platforms have significantly lowered the barriers to entry in marketing, effective utilization still requires digital literacy, strategic thinking, and often external support, all of which remain unevenly distributed among SMEs across Indonesia's diverse regions and sectors.

However, the adoption of digital marketing among Indonesian SMEs remains uneven and often superficial, reflecting deep-rooted structural and cognitive barriers that impede full participation in the digital economy. One of the most persistent obstacles is low digital literacy, particularly among micro-entrepreneurs and older business owners who may be unfamiliar with digital interfaces, online customer engagement strategies, or basic performance analytics. This skill gap not only limits the effective use of tools such as social media ads, marketplace dashboards, or email automation but also creates a dependency on informal, trial-and-error approaches rather than data-informed decision-making (Ndaba et al., 2025). In rural and remote areas, inadequate digital infrastructure, such as poor internet connectivity, limited access to devices, and unreliable power supply, further constrain SMEs from establishing consistent online operations or participating in e-commerce ecosystems. Financial constraints exacerbate these challenges, as many small businesses operate on tight margins and are unable to invest in paid advertising, website development, digital consultancy, or even employee upskilling.

Additionally, cultural and psychological barriers such as fear of cyber fraud, mistrust of online transactions, or resistance to organizational change also play a role in delaying digital adoption. More importantly, many small business owners are not strategically aware of how digital tools can be used not only for advertising but also as part of a long-term business transformation that is in line with customer experience management, market positioning, and brand development. Digital marketing frequently turns into a temporary solution rather than an integrated growth enabler in the absence of this strategic vision, which results in lost chances for competitive advantage and differentiation in a market that is becoming more and more digitally first (Bhaskar & Thaka, 2003). To address these complex issues, it is necessary to not only enhance infrastructure and tool accessibility but also to promote a change in perspective through specialized training, mentorship, and institutional support catered to the unique requirements of Indonesia's heterogeneous SME sector.

While government initiatives such as UMKM Go Digital, *Gerakan Nasional Literasi Digital*, and other digitalization programs have been introduced to support SMEs, their reach and effectiveness remain uneven across Indonesia's diverse regions (Kemenkominfo, 2021). These programs aim to increase digital literacy, facilitate access to e-commerce platforms, and promote technology adoption. However, in practice, their implementation often concentrates in urban centers, leaving rural and remote areas underserved. In many cases, the support provided is limited to one-time training without sustained mentoring or follow-up, reducing the likelihood of long-term behavioral change among SME owners. Additionally, there is a lack of coordination among stakeholders, government bodies, private platforms, and local institutions, resulting in fragmented efforts and overlapping initiatives. Academically, while research interest in SME digital transformation is growing, much of the literature remains sector-specific or platform-focused, limiting broader generalization. Studies often examine isolated tools like Instagram or Shopee or concentrate on single industry case studies, without offering a comprehensive view of how digital marketing is transforming SME practices nationally. There is also a notable absence of longitudinal and comparative research that could track changes in adoption behavior over time. This highlights the need for a more integrated, context-sensitive understanding of digital marketing adoption among Indonesian SMEs to better inform both policy design and practical support mechanisms.

Therefore, this paper aims to review and synthesize current literature on digital marketing strategies adopted by Indonesian SMEs within the broader framework of digital transformation. By focusing on scholarly works published between 2018 and 2024, the study seeks to capture recent developments and contextual nuances that characterize the digital evolution of marketing among SMEs in Indonesia. The review identifies key emerging trends, such as the growing use of social commerce, mobile-first marketing tactics, and platform-driven promotional strategies, while also highlighting how SMEs strategically adapt to digital tools under varying levels of resource availability, market competition, and institutional support. In doing so, this paper not only maps the landscape of digital marketing practices but also uncovers implementation challenges—including capability gaps, fragmented digital adoption, and policy disconnects—that constrain the scalability and sustainability of these efforts. Furthermore, it examines the role of enabling mechanisms such as government programs, digital literacy initiatives, and

ecosystem partnerships in facilitating or hindering transformation. By integrating findings across studies and sectors, this review contributes to a more comprehensive understanding of how Indonesian SMEs are navigating the digital marketing shift, offering valuable insights for researchers, policymakers, and practitioners aiming to strengthen digital inclusion and competitiveness within the SME sector.

II. LITERATURE REVIEW

The adoption of digital marketing among SMEs has attracted growing academic interest, especially as digital platforms redefine how businesses communicate with customers and compete in increasingly connected markets. Numerous studies have explored how SMEs in developing countries, including Indonesia, adapt to digital marketing innovations amidst structural and strategic limitations.

A) Digital Transformation and SMEs

Digital transformation refers to the integration of digital technologies into all areas of business to fundamentally change operations, enhance agility, and deliver improved value to customers (Vial, 2019). This transformation involves not only the adoption of digital tools but also a shift in organizational mindset, structure, and customer engagement models. For SMEs, digital transformation may encompass a range of activities—from digitizing internal workflows such as inventory, finance, and human resources, to adopting customer-facing technologies like e-commerce platforms, mobile apps, social media, and data analytics to optimize marketing and service delivery. In many cases, it also includes adopting cloud-based solutions to improve operational efficiency, flexibility, and scalability. However, the pace and extent of digital adoption among SMEs vary widely depending on firm size, sector, ownership structure, technological capabilities, and geographic location. Larger SMEs in urban areas are more likely to embrace advanced technologies due to better access to skilled labor, digital infrastructure, and capital investment, whereas micro and rural SMEs may face constraints related to affordability, digital literacy, and infrastructural readiness. Sectoral differences also play a role; service-based and retail SMEs tend to adopt digital marketing tools more rapidly than those in agriculture or traditional manufacturing, which may require more tailored solutions. These disparities highlight the importance of contextualizing digital transformation within the socio-economic realities of each SME segment, especially in diverse and decentralized economies like Indonesia.

Rahayu and Day (2017) showed that SMEs' adoption of e-commerce in Indonesia is influenced by multiple factors, including perceived benefits, internal IT readiness, and external pressures like consumer demand and market competition, in addition to the availability of digital infrastructure. According to their findings, the subjective assessments of SME owners about the value, usability, and profitability of e-commerce have just as much sway as the adoption's technical viability. Digital adoption is frequently hampered by a lack of knowledge about how these tools fit with the company's long-term objectives and value creation strategies, rather than a lack of access to technology. This view is supported by Alsharji et al. (2018), who argue that successful digital transformation in emerging economies depends significantly on internal organizational dynamics, including leadership commitment, change management capacity, and employee digital competence. In contexts like Indonesia, where many SMEs are family-owned or informally structured, management support and a willingness to invest in digital skills and strategic planning can substantially determine whether digital initiatives are adopted meaningfully or remain superficial. Beyond internal readiness, the growing role of digital platform ecosystems—such as Tokopedia, Shopee, Bukalapak, and social media platforms like Instagram and TikTok—has become a critical external enabler of digital marketing transformation. These platforms not only provide SMEs with access to large and targeted customer bases but also offer technical infrastructure, promotional tools, real-time analytics, and training resources through seller academies and community support. Moreover, platform-led programs often include onboarding assistance, live chat features, and algorithm-driven exposure, reducing entry barriers for SMEs that might lack digital marketing expertise. In this sense, digital platform ecosystems function not merely as sales channels but as holistic enablers of marketing capability development, especially for resource-constrained businesses. As such, the synergy between internal strategic intent and external platform support is increasingly recognized as a determining factor in how far Indonesian SMEs can advance along the digital marketing maturity curve.

B) Digital Marketing Adoption

Marketing transformation is often the entry point for SMEs into broader digitalization efforts, as it provides immediate visibility and direct engagement with customers at a relatively low cost. Among various business functions, marketing is typically the most adaptable to digital tools, making it a strategic starting point for resource-constrained firms. Taiminen and Karjaluoto (2015) found that SMEs commonly utilize digital channels such as websites, email campaigns, and social media to acquire and retain customers, while also gaining access to data-driven performance insights. In the Indonesian context, Susanti et al. (2023) observed that SMEs, particularly in consumer-facing sectors, rely heavily on platforms like Shopee, Tokopedia, Instagram, and WhatsApp Business to maintain market presence and boost sales, especially in the post-pandemic landscape. These platforms offer integrated services such as payment gateways, logistics support, and promotional tools tailored to small businesses.

Additionally, the rise of live commerce and influencer content through TikTok and Instagram Reels has enabled more personalized and engaging outreach, particularly to younger demographics. Despite growing usage, many SMEs still lack cohesive digital marketing strategies, often applying tools in an ad hoc manner without clear branding, targeting, or measurement frameworks. This underscores the need for not only access to digital platforms but also the development of strategic capability and digital literacy to ensure that marketing innovation translates into sustained business performance.

Nevertheless, research consistently highlights a gap between digital awareness and effective usage among SMEs. While many Indonesian SMEs are aware of the potential benefits of digital marketing, their application of digital tools remains largely reactive and fragmented. Ismail et al. (2018) found that a significant number of SMEs adopt platforms without a structured digital marketing strategy or a clear roadmap for long-term customer relationship management. As a result, digital tools are often used solely for short-term sales generation, rather than as part of a broader effort to build brand equity or customer loyalty. This tactical approach limits the full potential of digitalization and often leads to inconsistent messaging, low customer retention, and missed opportunities for growth. Dwivedi et al. (2021) further argue that for digital marketing to be impactful, SMEs must move beyond superficial tool adoption and embrace integrated approaches that are supported by internal capability building. This includes developing digital literacy within the organization, embedding analytics in decision-making, and aligning digital activities with core business objectives. Without these foundational elements, digital marketing remains underutilized and unsustainable, regardless of the tools available.

C) Challenges in Digital Marketing Implementation

Despite the growing availability of digital tools and platforms, Indonesian SMEs continue to face substantial and multifaceted obstacles that hinder the effective adoption of digital marketing. Chief among these is limited digital literacy, particularly in micro and traditional enterprises where business owners may lack even basic familiarity with online tools, social media metrics, or digital content planning. This limitation often leads to the underutilization of platform features or misalignment between marketing efforts and customer behavior. In addition, the lack of reliable internet infrastructure in non-urban and remote regions remains a persistent barrier, preventing consistent online engagement or participation in digital marketplaces. Cybersecurity concerns also discourage many SMEs from engaging more deeply with digital platforms, especially when they have limited knowledge of data protection or are unfamiliar with secure payment gateways. Financial constraints further complicate adoption, as SMEs often operate with minimal marketing budgets, making it difficult to invest in paid advertising, marketing automation tools, or hiring professionals with digital expertise (Susanti et al., 2023; Purnomo et al., 2024). Because of this, a lot of companies use unofficial, trial-and-error methods for digital marketing, learning from their peers or trying things out without official training or strategic direction. Although there may be some short-term benefits to this improvised approach, it rarely advances the creation of scalable or long-lasting digital capabilities. In the end, these obstacles exacerbate the digital divide and maintain disparities in the competitiveness of SMEs, highlighting the necessity of focused interventions that address capacity-related as well as structural limitations.

Moreover, government initiatives such as UMKM Go Digital, the Gerakan Nasional Literasi Digital, and various regional programs have aimed to accelerate SME participation in the digital economy. These initiatives typically provide onboarding support, digital literacy training, and access to marketplace integration. However, their impact has been uneven across provinces due to disparities in infrastructure, program outreach, and institutional capacity. While SMEs located in urban centers often benefit from structured programs, exposure to technology hubs, and partnerships with digital platforms, those in rural or less-developed areas may lack access or awareness of such opportunities. Some SMEs have successfully leveraged support from private sector partnerships, particularly with major e-commerce platforms like Tokopedia, Shopee, and Bukalapak, whose seller education programs, promotional toolkits, and marketplace training have helped small businesses navigate digital marketing environments.

Nevertheless, the lack of consistent follow-up, mentoring, and evaluation mechanisms significantly limits the long-term effectiveness of these interventions (Fizzanty & Maulana, 2023). Many training initiatives remain one-off events without continuity, failing to reinforce learning or track SME progress beyond initial onboarding. Moreover, without integrating support services, such as micro-financing, content creation tools, or analytics assistance, these programs may fall short of enabling SMEs to translate knowledge into sustained practice. As a result, while the intent of these initiatives is commendable, their design and implementation must evolve toward more holistic, context-sensitive, and outcomes-driven models to ensure inclusive and equitable digital transformation across the Indonesian SME landscape.

D) Enabling Factors and Success Drivers

Research suggests that several enabling factors can significantly improve digital marketing adoption among SMEs, particularly in developing economies like Indonesia, where resource constraints and capability gaps are prevalent. Key among these enablers are structured digital literacy programs, hands-on mentorship, and exposure to replicable best practices that help SMEs move beyond basic awareness toward confident and strategic usage of digital tools (Lukitaningsih et al., 2024). Training

focuses not only on platform functionality but also on branding, content strategy, and performance analysis can empower SMEs to make informed marketing decisions and optimize customer engagement. Mentorship and peer learning—especially when embedded within local business networks or incubator programs—can reinforce knowledge retention and adaptation across various business contexts. In addition, improving access to affordable digital infrastructure, including subsidized advertising credits, marketing automation software, or entry-level website design services, can lower the barriers to experimentation and innovation. Partnerships with e-commerce platforms have also proven highly effective in facilitating the adoption of digital marketing. Companies like Tokopedia, Shopee, and Bukalapak offer seller education programs, integrated logistics services, promotional features, and real-time analytics dashboards, all of which reduce complexity and support SMEs in executing more professional and data-informed campaigns. These platform ecosystems also help SMEs tap into larger consumer markets without the need for significant initial capital or independent distribution networks. When combined with government or NGO-led capacity-building efforts, such private sector partnerships can create synergistic ecosystems that accelerate SMEs' digital transformation and marketing effectiveness across diverse sectors and regions.

Additionally, acknowledged as important internal factors that impact the success of digital marketing transformation in SMEs are organizational culture, leadership involvement, and openness to innovation. A company's internal readiness, as demonstrated by its leadership vision, decision-making agility, and willingness to embrace change, frequently dictates how successfully digital tools are adopted and integrated, even though external support, such as infrastructure, training, and platform partnerships, plays a significant role. Research by Prihandono et al. (2024) shows that even in crowded or fiercely competitive markets, SMEs with proactive digital strategies and leadership that is flexible and innovative typically have better results when implementing digital marketing. These companies are more likely to invest in staff training, set aside funds for experimentation, and coordinate their marketing campaigns with long-term corporate objectives. Moreover, a supportive organizational culture that encourages learning, cross-functional collaboration, and customer-centric thinking provides the foundation for sustainable digital engagement. In contrast, SMEs with risk-averse leadership or rigid internal structures often treat digital marketing as a peripheral activity, resulting in fragmented efforts and underwhelming performance. Therefore, fostering a growth-oriented mindset within SMEs is essential, not only for overcoming resistance to digital change but also for maximizing the strategic potential of digital marketing in driving business development and resilience.

E) Theoretical Model in SME Digitalization Studies

To understand the dynamics of digital adoption among SMEs, scholars frequently draw upon established theoretical frameworks such as the Technology Acceptance Model (TAM), Diffusion of Innovation (DOI), and the Resource-Based View (RBV). The TAM, originally proposed by Davis (1989), emphasizes the role of perceived ease of use and perceived usefulness in influencing users' acceptance of new technologies, making it particularly relevant in analyzing how SME owners and employees evaluate digital marketing tools before adoption. The DOI framework by Rogers (2003) categorizes adopters into innovators, early adopters, early majority, late majority, and laggards, while also examining factors such as relative advantage, compatibility, complexity, and observability in the innovation decision process. This model provides valuable insights into how the characteristics of innovation itself, as well as the social and organizational environment, shape the diffusion of digital practices within the SME community. Meanwhile, the Resource-Based View (RBV) focuses on internal capabilities and strategic resources, such as managerial expertise, brand equity, digital skills, and learning capacity, as determinants of competitive advantage (Barney, 1991). In the context of Indonesian SMEs, RBV is particularly useful in explaining why some firms are better positioned to harness digital marketing tools for sustained performance gains, while others struggle due to a lack of intangible resources or adaptive capacity. Increasingly, scholars have begun integrating these models to provide a more holistic understanding of digital transformation, acknowledging that successful adoption is not only about access or attitudes but also about resource mobilization, strategic alignment, and organizational learning.

These models help explain differences in digital marketing maturity among Indonesian SMEs and offer guidance for future interventions tailored to firm-level readiness.

III. METHODOLOGY RESULTS AND DISCUSSION

This study adopts a structured literature review approach to examine how Indonesian Small and Medium Enterprises (SMEs) are adapting their marketing strategies in response to digital transformation. The review focuses on scholarly articles, conference papers, and relevant institutional reports published between 2018 and 2024, with an emphasis on peer-reviewed journals indexed in databases such as Scopus, Web of Science, and Google Scholar. Additional grey literature, including government publications and industry white papers, was consulted to capture the most recent policy developments and digitalization programs relevant to SMEs in Indonesia.

The search was conducted using a combination of keywords, including "digital marketing," "SMEs," "Indonesia," "digital transformation," "e-commerce," "social media marketing," and "technology adoption." Articles were selected based on relevance to the research topic, clarity of methodology, and empirical contribution. Inclusion criteria were: (1) studies focused on

Indonesian SMEs or comparative studies that include Indonesia, (2) publication between 2018 and 2024, and (3) studies that explicitly discuss digital marketing tools, platforms, strategies, or policy frameworks. Exclusion criteria included theoretical papers without empirical grounding, studies unrelated to marketing transformation, or those with insufficient focus on SMEs.

A total of 22 publications were selected for analysis. These were categorized thematically to identify key trends, challenges, enabling factors, and strategic adaptations related to digital marketing transformation in SMEs. Thematic coding was applied to extract insights on platform use, organizational readiness, government support, and the role of private-sector ecosystems. This method enables a synthesized understanding of the current landscape and provides a foundation for developing strategic and policy recommendations.

A) Digital Platform Adoption Patterns

Indonesian SMEs predominantly utilize social media platforms such as Instagram, WhatsApp Business, Facebook, and more recently, TikTok Shop to carry out marketing activities. These platforms provide accessible, low-cost solutions for promoting products and engaging directly with customers, making them particularly attractive for micro and small enterprises that operate with limited budgets. Their user-friendly interfaces, wide reach, and viral potential enable SMEs to increase visibility without the need for extensive technical expertise. In addition, e-commerce platforms like Tokopedia and Shopee are widely adopted not only as sales channels but also for their integrated logistics, payment systems, and built-in promotional features, which collectively help SMEs manage transactions more efficiently and access broader markets (Susanti et al., 2023).

The actual level of digital marketing integration is still quite shallow, though, even with the high level of platform usage. With no consistent content planning, marketing strategy, or performance monitoring systems, many SMEs use digital tools in an ad hoc or fragmented fashion. According to Taiminen and Karjaluoto (2015), this pattern indicates a reactive digital orientation, in which technology is employed as a short-term sales enhancer rather than as a long-term tool for brand development. As a result, even though SMEs are visible online, they might not be able to maximize their marketing return on investment or develop deep connections with customers. In order to move SMEs from a basic online presence to long-term digital competitiveness, this highlights the necessity of capacity building and strategic alignment.

B) Strategic Shifts in Marketing

The digital era has prompted a fundamental shift in how SMEs approach marketing, moving from purely transactional activities to more relationship-based, content-driven strategies. Businesses that once relied on conventional promotional methods such as brochures, price discounts, or point-of-sale advertising are increasingly experimenting with newer forms of engagement. These include influencer marketing to leverage social proof, search engine optimization (SEO) to enhance online discoverability, and the use of short-form video content on platforms like TikTok and Instagram Reels to capture the attention of digitally native consumers (Dwivedi et al., 2021; Lukitaningsih et al., 2024). Such approaches reflect a broader understanding that customer engagement, brand authenticity, and emotional connection are now central to driving sustained marketing outcomes.

However, while these innovations are promising, the level of strategic marketing maturity among Indonesian SMEs remains highly uneven. Only a small proportion of firms, mostly located in urban areas or connected to digital startup ecosystems, have developed structured digital customer funnels, invested in analytics tools, or designed marketing campaigns based on data insights. These SMEs often benefit from participation in accelerator programs, partnerships with e-commerce platforms, or targeted government initiatives that provide training and mentorship (Prihandono et al., 2024). In contrast, most SMEs still operate without systematic digital planning, relying instead on intuition and platform algorithms, which limits the scalability and long-term effectiveness of their digital marketing efforts.

C) Persistent Barriers to Digital Transformation

Despite growing digital access, many Indonesian SMEs continue to face structural, technical, and cognitive barriers. These include:
a. **Limited digital capabilities:** Many SME owners lack formal marketing or IT education, making it difficult to optimize digital tools (Rahayu & Day, 2017).
b. **Poor infrastructure:** Outside major cities, internet reliability and speed remain inconsistent, limiting full digital engagement (Purnomo et al., 2024).
c. **Financial constraints:** Budget limitations restrict access to paid ads, premium analytics tools, or skilled digital marketing consultants.
d. **Strategic ambiguity:** SMEs often lack a roadmap or KPIs to evaluate the impact of their digital marketing efforts, resulting in missed opportunities.

These challenges disproportionately affect micro-enterprises, women-led businesses, and rural SMEs, widening the digital divide within the sector.

D) Enabling Conditions and the Role of Policy

Government-led programs such as UMKM Go Digital and the Gerakan Nasional Literasi Digital represent important efforts to stimulate digital inclusion among Indonesian SMEs. These initiatives aim to enhance digital capabilities by providing training, awareness campaigns, and onboarding support for online platforms. While these are commendable first steps, findings from recent literature suggest that their effectiveness remains constrained by several limitations. Key among these is the need for better program targeting—ensuring that support reaches micro-enterprises, women-led businesses, and SMEs in underdeveloped regions who are often excluded from mainstream interventions. Additionally, the absence of robust follow-up mechanisms and performance monitoring has weakened the long-term impact of these initiatives, as SMEs often lack sustained mentoring and contextualized support after initial training (Fizzanty & Maulana, 2023). In contrast, partnerships with private sector actors, particularly platform-led initiatives such as Tokopedia Academy and Shopee University, have demonstrated greater agility and relevance. These programs are more immediately actionable for SMEs navigating digital marketplaces because they offer both technical knowledge and practical, hands-on training that takes into account platform-specific requirements, consumer trends, and localized best practices.

In determining the results of digital transformation, internal firm-level factors are just as important, if not more so, than the extent of external support. The value of leadership dedication, receptivity to new ideas, and a culture that values lifelong learning are all frequently emphasized by research. According to Lukitaningsih et al. (2024) and Alsharji et al. (2018), SMEs with leaders who are prepared to invest in employee upskilling, try new technologies, and incorporate digital tools into their core business strategy typically outperform their peers in implementing and maintaining digital marketing practices. These businesses are more likely to create long-term digital roadmaps, track performance metrics, and modify campaigns using data insights rather than just gut feeling. Consequently, digital marketing should not be perceived merely as a sales booster or a reactive tool during crises, but as a foundational strategic capability that supports growth, competitiveness, and business resilience in the long run.

IV. CONCLUSION

Digital transformation has become an essential trajectory for the growth and long-term sustainability of Indonesian SMEs, particularly in the realm of marketing, where the need for visibility, agility, and customer engagement is most pressing. As this review has shown, digital tools and platforms—ranging from e-commerce marketplaces to social media and analytics dashboards—are being adopted at a growing pace across the SME sector. However, the implementation of digital marketing strategies remains inconsistent, fragmented, and in many cases, superficial. While some SMEs have begun to integrate digital marketing into their business models with measurable impact, many others continue to rely on ad hoc usage, lacking clear objectives, performance indicators, or alignment with broader business goals. This disparity reflects both internal capacity constraints and external ecosystem gaps, including uneven access to training, infrastructure, and strategic support. As a result, digital adoption is often driven by necessity or imitation rather than by long-term planning or innovation. Without deeper strategic integration, digital marketing risks becoming a short-term solution rather than a sustainable lever for competitive advantage. Addressing this issue requires not only increased access to technology but also a coordinated effort to build digital capability, foster leadership readiness, and promote a mindset of continuous learning within the SME sector.

The findings indicate that Indonesian SMEs predominantly engage with widely accessible digital platforms such as Instagram, Tokopedia, Shopee, and WhatsApp to promote their products and interact with customers. These platforms offer relatively low-cost entry points into digital marketing and are intuitive, mobile-friendly, and well-suited to the behavior of local consumers. However, in many cases, SMEs utilize these tools only at a surface level, posting product images, responding to inquiries, or participating in flash sales, without aligning such activities with a comprehensive marketing strategy or performance measurement framework. The adoption remains functional rather than strategic, often driven by immediate sales targets rather than long-term brand development or customer relationship building. While the shift from traditional to digital marketing has created new avenues for visibility, reach, and engagement, not all SMEs are structurally or cognitively equipped to fully leverage these benefits. Challenges such as limited digital literacy, absence of customer segmentation strategies, and lack of familiarity with data analytics tools hinder SMEs from moving beyond basic platform usage. As a result, the true potential of digital transformation in terms of sustained growth, customer loyalty, and market differentiation remains underutilized across much of the SME landscape.

Several persistent challenges continue to impede the transformation of digital marketing within the Indonesian SME sector. Limited digital literacy remains a core issue, particularly among micro and traditional business owners who may lack not only technical know-how but also confidence in navigating digital platforms and tools. This skills gap leads to inefficient use of digital resources and prevents SMEs from making data-driven marketing decisions. In rural and remote areas, the problem is compounded by inadequate infrastructure, unreliable internet connectivity, lack of digital devices, and low availability of ICT support services, all of which create structural barriers to sustained digital engagement. Financial constraints also limit SMEs' ability to invest in essential marketing assets such as sponsored ads, premium software, or specialized personnel, while human

resource limitations mean that marketing is often treated as an auxiliary task rather than a strategic function. Beyond these operational constraints, many SMEs suffer from a lack of long-term planning and innovation capability. Without a clear digital roadmap, defined goals, or mechanisms to track outcomes, digital marketing efforts remain fragmented and reactive. This undermines their effectiveness and hinders scalability. The absence of a culture of continuous learning and experimentation further weakens the ability of SMEs to adapt to changing digital trends or respond proactively to market dynamics, thereby limiting the transformative potential of digital marketing adoption across the sector.

Nevertheless, some enabling factors have emerged that are helping to bridge the gap between digital marketing awareness and effective implementation among Indonesian SMEs. Government-led digitalization initiatives, such as UMKM Go Digital and Literasi Digital Nasional, have provided foundational support by promoting digital literacy, offering access to training programs, and encouraging online business registration and formalization. In parallel, e-commerce platforms such as Tokopedia, Shopee, and Bukalapak have played a significant role through seller education programs, tutorial content, and marketplace tools that guide SMEs in navigating digital sales channels. These platform-driven initiatives often prove more agile and responsive to SME needs, offering targeted and practical knowledge that aligns closely with real-time consumer behavior and platform algorithms. Additionally, collaborations with NGOs, universities, and local governments have introduced digital marketing workshops and mentoring opportunities, expanding outreach to SMEs in second-tier cities and rural areas. Notably, the most successful outcomes are observed among SMEs that exhibit strong internal readiness, characterized by proactive leadership, openness to change, and a willingness to allocate time and resources toward digital capacity building. These firms tend to approach digital marketing not as a one-off tactic but as a long-term strategic investment, integrating it into their core business models, customer relationship management systems, and innovation processes. This reinforces the notion that while external support mechanisms are crucial, internal drive and strategic commitment remain decisive in achieving meaningful digital transformation.

To accelerate an inclusive and sustainable digital transformation among SMEs in Indonesia, this study emphasizes the importance of a dual-pronged approach. First, enhancing firm-level readiness through targeted education, mentoring, and capacity-building initiatives is essential to equip SMEs with the skills, mindset, and strategic orientation needed to effectively adopt and integrate digital marketing tools. This includes improving digital literacy, fostering an innovative culture, and encouraging long-term strategic planning within SME operations. Second, strengthening the external digital ecosystem, through coordinated public-private collaboration, is equally critical. Government agencies, digital platforms, financial institutions, and educational institutions must work together to deliver more adaptive, scalable, and regionally inclusive support mechanisms. Such efforts could involve co-designed training curricula, subsidized access to digital tools, or localized digital infrastructure development, ensuring that no SME is left behind due to geographic or structural disadvantages.

In order to understand how digital marketing adoption patterns vary across industries like manufacturing, services, the creative economy, and agriculture, future research should focus more on sector-specific dynamics. In order to determine the sustainability of the results from current interventions and to monitor the evolution of digital maturity, longitudinal studies are also required. Furthermore, the accessibility, applicability, and effect of emerging technologies on SME competitiveness in the Indonesian context should be investigated. These technologies include marketing automation, artificial intelligence, and machine learning. In addition to advancing scholarly discussion, a better comprehension of these components will help shape more focused and efficient regulations to assist the SME sector's next stage of digital transformation.

Strategic Recommendation
To accelerate SME digital transformation, especially in underrepresented regions and sectors, this review proposes several context-specific strategies:
   a. AI-Driven Microtools: Develop low-cost AI tools such as chatbots, content generators, or automated sentiment analysis that are user-friendly for SMEs with minimal technical background.
   b. Community-Based Digital Hubs: Utilize village libraries, BUMDes, or co-working spaces as digital learning centers equipped with shared devices, internet access, and local trainers.
   c. Public–Private Innovation Labs: Foster partnerships between universities, digital platforms (e.g., Tokopedia, Shopee), and fintech firms to co-develop affordable marketing analytics dashboards for SMEs.
   d. Cultural and Linguistic Localization: Design gamified or video-based digital literacy modules in regional languages (Javanese, Sundanese, Bugis, etc.) to engage younger and less formally educated entrepreneurs.

There are still a number of structural and implementation gaps in Indonesia's SME digitalization, despite admirable efforts by the public and private sectors. Government programs like UMKM Go Digital and Gerakan Nasional Literasi Digital have established foundational awareness and digital onboarding initiatives. However, their generic training content, urban-centric delivery, and lack of follow-up frequently limit their long-term impact. At the same time, online marketplaces such as Tokopedia and Shopee provide more nimble and focused assistance by means of platform-based analytics and seller training. However,

access to these resources is typically limited to SMEs that are already using digital technology.

To address these disparities and enhance the effectiveness of existing initiatives, this study proposes strategic upgrades based on findings from the literature review. These recommendations emphasize follow-through mentoring, regional customization, and stronger collaboration across government, academia, and private industry. The table below summarizes key programs currently active in Indonesia.

Summary of Government and Platform-Based SME Digital Programs and Strategic Recommendations

Program / Initiative	Lead Organization	Current Scope	Identified Gap	Proposed Strategic Upgrade
UMKM Go Digital	Ministry of Cooperatives and SMEs (Kemenkop UKM)	Onboarding SMEs to e-commerce platforms	Lacks mentoring and KPI-based progress tracking	Add post-training mentoring & outcome-based evaluation
Gerakan Nasional Literasi Digital	Ministry of Communication & Information (Kominfo)	Nationwide digital literacy awareness	Generic, one-size-fits-all content	Develop localized, sector-specific modules in regional languages
Tokopedia Academy	Tokopedia (Private Sector)	Platform-specific seller training	Focused on existing urban sellers	Expand outreach to rural sellers via offline hubs & partnerships
Shopee University	Shopee (Private Sector)	Seller education, analytics tutorials	Limited offline presence for traditional SMEs	Create mobile training units & community-based learning events
Digital Economy Task Force	Cross-ministerial	National policy coordination	Coordination across ministries remains fragmented	Establish public-private innovation labs with SMEs & universities

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